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## **CLAIMS**

- 1. A method of diagnosing HCC or a predisposition for developing HCC in a subject, comprising determining a level of expression of MGC47816 or HES6 in a patient-derived biological sample, wherein an increase in said sample expression level as compared to a normal control level of said gene indicates that said subject suffers from or is at risk of developing HCC.
  - 2. The method of claim 1, wherein said sample expression level is at least 10% greater than said normal control level.
- The method of claim 1, wherein the expression level is determined by any one method selected from group consisting of:
  - (a) detecting mRNA of MGC47816 or HES6,

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- (b) detecting a protein encoded by MGC47816 or HES6, and
- (c) detecting a biological activity of a protein encoded by MGC47816 or HES6.
- 4. The method of claim 3, wherein said detection is carried out on a DNA array.
- 5. The method of claim 1, wherein said patient-derived biological sample comprises an epithelial cell.
- 6. The method of claim 1, wherein said patient-derived biological sample comprises a hepatocellular carcinoma cell.
  - 7. The method of claim 1, wherein said patient-derived biological sample comprises an epithelial cell from a hepatocellular carcinoma.
  - 8. A method of screening for a compound for treating or preventing HCC, said method comprising the steps of:
    - a) contacting a test compound with a polypeptide encoded by MGC47816 or HES6;
      - b) detecting the binding activity between the polypeptide and the test compound; and
      - c) selecting the test compound that binds to the polypeptide.
- 30 9. A method of screening for a compound for treating or preventing HCC, said method comprising the steps of:
  - a) contacting a candidate compound with a cell expressing MGC47816 or HES6, and
  - b) selecting the candidate compound that reduces the expression level of MGC47816 or HES6.

10. The method of claim 9, wherein said cell comprises a hepatocellular carcinoma cell.

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- 11. A method of screening for a compound for treating or preventing HCC, said method comprising the steps of:
  - a) contacting a test compound with a polypeptide encoded by MGC47816 or HES6;
  - b) detecting the biological activity of the polypeptide of step (a); and
  - c) selecting the test compound that suppresses the biological activity of the polypeptide as compared to the biological activity detected in the absence of the test compound.
- 12. The method of claim 11, wherein the biological activity of the polypeptide is cell proliferative activity.
- 13. A method of screening for compound for treating or preventing HCC, said method comprising the steps of:
  - a) contacting a candidate compound with a cell into which a vector, comprising the transcriptional regulatory region of MGC47816 or HES6 and a reporter gene that is expressed under the control of the transcriptional regulatory region, has been introduced
    - b) measuring the expression or activity of said reporter gene; and
  - c) selecting the candidate compound that reduces the expression or activity of said reporter gene, as compared to a control.
- 14. A kit comprising a detection reagent which binds to (a) the nucleic acid sequence of MGC47816 or HES6 or (b) a polypeptide encoded thereby.
- 15. A method of treating or preventing HCC in a subject comprising administering to said subject an antisense composition, wherein said antisense composition comprises a nucleotide sequence complementary to a coding sequence of MGC47816 or HES6.
- 16. A method of treating or preventing HCC in a subject comprising administering to said subject an siRNA composition, wherein said siRNA composition reduces the expression of MGC47816 or HES6.
- 17. The method of claim 16, wherein the siRNA comprises a sense strand comprising a nucleotide sequence selected from the group consisting of of SEQ ID NO: 19 and 26 as the target sequence.
- 18. A method for treating or preventing HCC in a subject comprising the step of administering to said subject a pharmaceutically effective amount of an

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- antibody, or fragment thereof, that binds to a protein encoded by MGC47816 or HES6.
- 19. A method of treating or preventing HCC in a subject comprising administering to said subject a vaccine comprising (a) a polypeptide encoded by MGC47816 or HES6, (b) an immunologically active fragment of said polypeptide, or (c) a polynucleotide encoding said polypeptide.
- 20. A method for treating or preventing HCC in a subject, said method comprising the step of administering a compound that is obtained by the method according to any one of claims 8-13.
- 10 21. A composition for treating or preventing HCC, said composition comprising a pharmaceutically effective amount of an antisense polynucleotide or small interfering RNA (siRNA) against MGC47816 or HES6 as an active ingredient, and a pharmaceutically acceptable carrier.
- The composition of claim 21, wherein the siRNA comprises a sense strand comprising a nucleotide sequence selected from the group consisting of SEQ ID NO: 19and 26 as the target sequence.
  - 23. A composition for treating or preventing HCC, said composition comprising a pharmaceutically effective amount of an antibody or fragment thereof that binds to a protein encoded by MGC47816 or HES6 as an active ingredient, and a pharmaceutically acceptable carrier.
  - 24. A composition for treating or preventing HCC, said composition comprising a pharmaceutically effective amount of a compound selected by the method of any one of claims 8-13 as an active ingredient, and a pharmaceutically acceptable carrier
- 25. A small interfering RNA, wherein the sense strand thereof comprises a nucleotide sequence selected from the group consisting of SEQ ID NO: 19 and 26 as the target sequence.